

LISTING OF THE CLAIMS:

Claim 1 (Currently Amended) A process of cleaning a precision surface comprising contacting a reactive ion etched precision surface having vias, cavities, trenches or channels incorporated therein, said reactive ion etched precision surface containing reactive ion etch residue, with a composition which ~~comprises~~ consists essentially of liquid or supercritical carbon dioxide and a fluoride-generating species until the reactive ion etch residue is removed from the precision surface.

Claim 2 (Previously Presented) A process in accordance with Claim 1 wherein said fluoride-generating species is a fluorine-containing acid.

Claim 3 (Previously Presented) A process in accordance with Claim 2 wherein said fluorine-containing acid is selected from the group consisting of hydrogen fluoride, fluorosulfonic acid and perfluorosulfonic acid.

Claim 4 (Original) A process in accordance with Claim 1 wherein said fluoride-generating species is a fluorine-containing acid amine adduct.

Claim 5 (Original) A process in accordance with Claim 4 wherein said fluorine-containing amine adduct is pyridine:hydrogen fluoride, amine:hydrogen fluoride or an alkylamine:hydrogen fluoride.

Claim 6 (Original) A process in accordance with Claim 1 wherein said fluoride-generating species is an amine fluoride.

Claim 7 (Original) A process in accordance with Claim 1 wherein said fluoride-generating species is a quaternary amine fluoride.

Claim 8 (Original) A process in accordance with Claim 7 wherein said quaternary amine fluoride is selected from the group consisting of a tetraalkylammonium fluoride and a perfluoroalkylammonium fluoride.

Claim 9 (Original) A process in accordance with Claim 1 wherein said fluoride-generating species is a perfluororalkylsulfonyl fluoride.

Claim 10 (Original) A process in accordance with Claim 9 wherein said perfluororalkylsulfonyl fluoride is trifluoromethylsulfonyl fluoride or perfluorooctylsulfonyl fluoride.

Claim 11 (Original) A process in accordance with Claim 1 wherein said fluoride-generating species is an alkylsulfonyl fluoride.

Claim 12 (Previously Presented) A process in accordance with Claim 1 wherein said fluoride-generating species is an arylsulfonyl fluoride.

Claim 13 (Previously Presented) A process in accordance with Claim 1 wherein said fluoride-generating species is an onium salt-containing fluorine.

Claim 14 (Original) A process in accordance with Claim 13 wherein said onium salt containing fluorine is selected from the group consisting of benzene diazonium fluoride and benzene diazonium tetrafluoroborate.

Claim 15 (Currently Amended) A process in accordance with Claim 1 wherein said composition ~~includes~~ further consists of a component selected from the group consisting of a surfactant, a co-solvent and mixtures thereof.

Claim 16 (Previously Presented) A process in accordance with Claim 1 wherein said contact between said reactive ion etched precision surface and said composition occurs at a pressure in the range of between about 1,000 psi and about 6,000 psi and at a temperature in the range of between about 40°C and about 100°C.

Claim 17 (Previously Presented) A process in accordance with Claim 1 wherein said reactive ion etched precision surface is provided by a semiconductor sample, a metal selected from the group consisting of aluminum, silicon, tungsten, titanium, tantalum, platinum, palladium, iridium, chromium, copper and silver, a polymer selected from the group consisting of polyimides and polyamides or insulators.

Claim 18 (Previously Presented). A process in accordance with Claim 17 wherein said reactive ion etched precision surface is provided by a semiconductor sample.

Claim 19 (Original) A process in accordance with Claim 18 wherein said semiconductor sample is selected from the group consisting of a semiconductor wafer, a semiconductor chip, a ceramic substrate and a patterned film structure.

Claim 20 (Original) A process in accordance with Claim 19 wherein said semiconductor sample is a semiconductor wafer.